

WHAT IS CLAIMED IS:

1. An isolated and purified nucleic acid molecule which encodes a human VR3 receptor protein.

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2. The isolated and purified nucleic acid molecule of claim 1, having a nucleotide sequence selected from a group consisting of: (SEQ.ID.NO.:5); (SEQ.ID.NO.:6); (SEQ.ID.NO.:8); (SEQ.ID.NO.:10) and (SEQ.ID.NO.:11).

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3. The isolated and purified nucleic acid molecule of claim 1, wherein said molecule is selected from a group consisting of DNA ; RNA; cDNA and genomic DNA.

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4. An expression vector comprising a nucleic acid sequence encoding human VR3 receptor protein.

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5. The expression vector of claim 4, wherein the nucleic acid sequence encoding human VR3 receptor protein is selected from a group consisting of: RNA; genomic DNA; (SEQ.ID.NO.:5); (SEQ.ID.NO.:6); (SEQ.ID.NO.:8); (SEQ.ID.NO.:10) and (SEQ.ID.NO.:11).

6. The expression vector of claim 4, wherein the expression vector contains DNA encoding human VR3 receptor protein.

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7. A recombinant host cell comprising the expression vector of claim 4.

8. The recombinant host cell of claim 7, wherein said expression vector comprises a nucleotide sequence selected from a group consisting of:

(SEQ.ID.NO.:5); (SEQ.ID.NO.:6); (SEQ.ID.NO.:8); (SEQ.ID.NO.:10) and (SEQ.ID.NO.:11).

9. The recombinant host cell of claim 7, wherein said expression vector
5 comprises genomic DNA encoding a human VR3 receptor.

10. A protein encoded by a nucleic acid molecule of claim 1, wherein said protein functions as human VR3 receptor protein.

10 11. The protein according to claim 10, having an amino acid sequence selected from a group consisting of: (SEQ.ID.NO.:7) (SEQ.ID.NO.:9) and (SEQ.ID.NO.:12).

12. A monospecific antibody immunologically reactive with human
15 VR3 receptor protein.

13. The antibody of Claim 12, wherein the antibody blocks activity of the human VR3 receptor.

20 14. A process for expression of human VR3 receptor protein in a recombinant host cell comprising:
(a) transferring the expression vector of Claim 4 into suitable host cells; and
(b) culturing the host cells of step (a) under conditions which allow expression of the human VR3 receptor protein from the expression vector.

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15. A method of identifying compounds that modulate human VR3 receptor protein activity, comprising:

(a) combining a modulator of human VR3 receptor protein activity with human VR3 receptor protein. and

(b) measuring an effect of the modulator on the human VR3 receptor protein.

16. The method of claim 15, wherein the effect of the modulator on the
5 protein is inhibiting or enhancing binding of human VR3 receptor ligands.

17. The method of claim 15, wherein the effect of the modulator on the human VR3 receptor protein is stimulation or inhibition of human VR3 receptor activity protein.

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18. A compound active in the method of Claim 15.

19. A compound active in the method of Claim 15, wherein said compound is an agonist or antagonist of a human VR3 receptor.

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20. A compound active in the method of Claim 15, wherein said compound is a modulator of expression of a human VR3 receptor.

21. A pharmaceutical composition comprising a compound active in
20 the method of Claim 15.

22. A method of treating a patient in need of such treatment for a condition which is mediated by a human VR3 receptor, comprising administration of a compound active in the method of Claim 15.

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